IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant:	M.T. Berg	Attorney Docket No.:	130101
Application No.:	09/873,018	Art Unit:	2181
Filed:	June 1, 2001	Confirmation No.:	3220

Title: METHOD AND SYSTEM FOR COMMUNICATING AN INFORMATION PACKET THROUGH MULTIPLE NETWORKS

APPELLANT'S APPEAL BRIEF

Seattle, Washington
October 12, 2007

TO THE COMMISSIONER FOR PATENTS:

This Appeal Brief is filed in support of a Notice of Appeal filed in the above-identified application on August 14, 2007, appealing the decision dated May 14, 2007, of the Primary Examiner finally rejecting Claims 11-24 and 35-68.

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I. REAL PARTY IN INTEREST

The subject application is owned by Noatak Software LLC, of Las Vegas, NV.

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II. RELATED APPEALS AND INTERFERENCES

Upon information and belief, Appellant does not have any knowledge of related appeals or interferences that may directly affect or have a bearing on the decision of the Board of Appeals and Interferences (hereinafter the "Board") in the pending appeal.

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III. STATUS OF CLAIMS

Claims 11-24 and 35-68 are rejected and are on appeal.

Claims 1-10 and 25-34 have been canceled.

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IV. STATUS OF AMENDMENTS

The Notice of Appeal was filed on August 14, 2007, concurrently with a Fourth Supplemental IDS, which has yet to be acknowledged. Upon information and belief, there are no other outstanding amendments filed subsequent to the final Office Action of May 14, 2007.

A Fifth Supplemental IDS is being filed concurrently with this Appeal Brief.

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V. SUMMARY OF CLAIMED SUBJECT MATTER

The present application relates to a system, method, server farm, and computer-readable medium for selectively processing or forwarding incoming network packets.

Independent Claim 11 recites an information processing system, comprising a first computing device. (Figure 4a, Server 1.) The first computing device is configured to receive an information packet. (Figure 4a, "Internet Connection"; page 19, lines 5-8.) This information packet passes through both a global computer network and a first local area network. (Figure 4a, "Internet Connection," and "LAN A Hub/Switch"; page 19, lines 5-8.) A choice is then made in response to at least the information packet and a state of the information processing system. (Figure 7, "iNIC 1: State Table"; page 28, line 20, to page 29, line 4.) When the state is a first state, the first computing device will selectively output the information packet, such that the output information packet bypasses the first local area network. (Figure 4a, "LAN B Hub/Switch"; page 19, lines 9-15; page 31, line 26, to page 32, line 4.) When the state is a second state, the first computing device will selectively execute a software application associated with the information packet. (Figure 5a, "Socket Application"; page 22, lines 20-24.)

Independent Claim 35 recites a method performed by a first computing device of an information processing system. (Figure 4a, Server 1.) The method comprises, first, receiving an information packet (Figure 4a, "Internet Connection"; page 19, lines 5-8) from a first local area network coupled to a global computer network. (Figure 4a, "Internet Connection" and "LAN A Hub/Switch"; page 19, lines 5-8.) Next, a choice is made in response to at least the information packet and a state of the information processing system. (Figure 7, "iNIC 1: State Table"; page 28, line 20, to page 29, line 4.) If the state is a first state, the first computing device selectively outputs the information packet, such that the output information packet bypasses the first local area network. (Figure 4a, "LAN B Hub/Switch"; page 19, lines 9-15; page 31, line 26,

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to page 32, line 4.) If the state is a second state, the first computing device selectively executes a software application associated with the information packet. (Figure 5a, "Socket Application"; page 22, lines 20-24.)

Independent Claim 55 recites a server farm, comprising a first computing device. (Figure 4a, Server 1.) The first computing device is configured to receive an information packet. (Figure 4a, "Internet Connection"; page 19, lines 5-8.) This information packet passes through both a global computer network and a first local area network. (Figure 4a, "Internet Connection" and "LAN A Hub/Switch"; page 19, lines 5-8.) A choice is then made in response to at least the information packet and a state of the server farm. (Figure 7, "iNIC 1: State Table"; page 28, line 20, to page 29, line 4.) When the state is a first state, the first computing device will selectively output the information packet, such that the output information packet bypasses the first local area network. (Figure 4a, "LAN B Hub/Switch"; page 19, lines 9-15; page 31, line 26, to page 32, line 4.) When the state is a second state, the first computing device will selectively execute a software application associated with the information packet. (Figure 5a, "Socket Application"; page 22, lines 20-24.)

Independent Claim 62 recites a computer-readable memory medium storing instructions that, when executed, cause a first computing device of an information processing system (Figure 4a, Server 1) to respond to an information packet (Figure 4a, "Internet Connection"; page 19, lines 5-8). This information packet is received through both a global computer network and a first local area network. (Figure 4a, "Internet Connection" and "LAN A Hub/Switch"; page 19, lines 5-8.) The instructions, when executed, then cause a choice to be made in response to at least the information packet and a state of the information processing system. (Figure 7, "iNIC 1: State Table"; page 28, line 20, to page 29, line 4.) When the state is a first state, the first computing device will selectively output the information packet, such that the output

information packet bypasses the first local area network. (Figure 4a, "LAN B Hub/Switch"; page 19, lines 9-15; page 31, line 26, to page 32, line 4.) When the state is a second state, the first computing device will selectively execute a software application associated with the information packet. (Figure 5a, "Socket Application"; page 22, lines 20-24.)

Various dependent claims recite additional features. For example, dependent Claims 14, 38, 60, and 64 recite that the first computing device outputs the packet by encapsulating it. (Figure 11b, "ipOS Encapsulation Header"; page 51, line 11, to page 52, line 27.) The encapsulation header comprises information necessary to reference a data structure of a connection with a client: a Source IP Address, a Source Port, a Destination IP Address, and a Destination Port. (Figure 11b; Page 51, lines 15-21.) This port and IP address information, in combination, operate as a reference to a connection endpoint. (Page 52, lines 3-24.) This form of encapsulation is more efficient than techniques known in the prior art, which require additional instructions to find the connection endpoint information. (Page 52, line 28, to page 53, line 5.) Dependent Claims 15 and 39 further recite that the information necessary to reference a data structure of a connection with a client is included within a single encapsulation header. (Page 52, lines 16-24.)

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VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Ground 1: Whether Claims 11, 13, 14, 16-22, 35, 37, 38, 40-46, 49-58, 60, and 62-68 are patentable under 35 U.S.C. § 102(b) over Aversa et al., *Load Balancing a Cluster of Web Servers Using Distributed Packet Rewriting*, Computer Science Department, Boston University (hereinafter "Aversa") in view of W. Richard Stevens, *TCP/IP Illustrated: The Protocols, Volume 1* (1994) (hereinafter "Stevens");

Ground 2: Whether Claims 12, 23, 24, 36, 47, 48, 59, and 61 are patentable under 35 U.S.C. § 103(a) over Aversa in further view of U.S. Patent No. 6,085,238, to Yuasa et al. (hereinafter "Yuasa"); and

Ground 3: Whether Claims 15 and 39 are patentable under 35 U.S.C. § 103(a) over Aversa and in view of C. Perkins, IBM, *RFC 2003* (1996) (hereinafter "Perkins").

VII. ARGUMENT

Prior to setting forth the reasons why the appealed claims are in condition of allowance, brief discussions of Aversa, Stevens, and Perkins are provided.

Discussion of Aversa

Aversa, according to its abstract, purportedly presents a prototype scalable Web server. The described system uses a technology called "Distributed Packet Rewriting" to redirect TCP connections. (Aversa, Abstract.) A server receives a request from a client, and then sometimes chooses to rewrite the packet to route it to another server, instead of servicing the packet locally. (Aversa, page 4, para. 2.) The other server will then process the request and reply to the client. (Aversa, page 4, para. 2.) To route the packet to another server, the servers in Aversa use IP-IP encapsulation as outlined in Perkins. (Aversa, page 4, para. 3, to page 5, para. 1.)

Figure 2 illustrates the primary teachings of Aversa. In Figure 2, three clients (Clients A-C), five servers (Servers 1-5), and one local network are depicted. Each server is shown connected to the one local network by a thin dark line. Bold arrows are included to indicate data flow from the clients, and then from Server 4 to Server 2, from Server 5 to Server 4, and from Server 2 to Server 1, before responses are sent back to the clients. Nowhere does Figure 2, or anything else in Aversa, suggest "selectively output the information packet, such that the output information packet bypasses the first local area network."

Discussion of Stevens

Stevens is cited by the Office Action per M.P.E.P. § 2131.01(B)-(C) solely to explain the meaning of terms contained in Aversa and to allege that certain elements of the independent claims are inherent in Aversa. Namely, the Office Action cited Stevens to purportedly show that Aversa inherently teaches "selectively execut[ing] a software application associated with the

information packet." Since Appellant asserts below that the recited claims are novel due to other elements contained therein, no further discussion of Stevens is necessary.

Discussion of Perkins

Perkins, according to its abstract, purportedly presents a protocol for encapsulating IP datagrams. This encapsulation, as described, consists of inserting an additional IP header before the datagram's existing IP header. (Perkins, page 3.) This header is added by an encapsulator, and the packet is then routed to a decapsulator, where the original packet is extracted and routed further to its original destination. (Perkins, pages 1-2.) This IP header comprises a Source IP Address and Destination IP Address, but has no further information that would be necessary to reference a data structure of a connection. (Perkins, page 5; page 7 ("[T]he outer IP header does not refer to any port number.").)

Ground 1: Whether Claims 11, 13, 14, 16-22, 35, 37, 38, 40-46, 49-58, 60, and 62-68 Are Patentable Under 35 U.S.C. § 102(b) Over Aversa in View of Stevens

The Office Action finally rejected Claims 11, 13, 14, 16-22, 35, 37, 38, 40-46, 49-58, 60, and 62-68 as being anticipated by Aversa in view of Stevens. Anticipation can only be established by a single prior art reference that discloses each and every element of the claimed invention. See *Structural Rubber Products Co. v. Park Rubber Co.*, 749 F.2d 707, 223 U.S.P.Q. (BNA) 1264 (Fed. Cir. 1984). Appellant respectfully submits that Aversa fails to disclose each and every element of these claims, and that Stevens does not overcome the deficiency of disclosure in Aversa.

Independent Claims 11, 35, and 55

With regard to independent Claims 11, 35, and 55, Appellant submits that Aversa, whether considered alone or in view of Stevens, fails to disclose a first computing device configured to:

selectively output the information packet, such that the output information packet bypasses the first local area network[.]

The Office Action argues that Aversa discloses this feature on page 3, para. 2 ("forwarding to different server"); on page 2, para. 3 ("a TCP router acts as a front-end that forwards requests for Web services to the individual back-end servers of the cluster"); and in Figure 2 (the Office Action stating: "figure 2 shows that during forwarding, use of the local network is avoided"). Appellant respectfully disagrees.

Appellant submits that Figure 2 does not disclose or suggest outputting an information packet in a way that bypasses the first local area network. Figure 2 depicts a group of servers (Servers 1-5) connected to each other by exactly one "Local Network." These connections are represented by thin black lines. This Local Network is connected by a jagged line to the cloud labeled "Internet," which is then connected by other jagged lines to a group of clients (Clients A-C). Appellant submits these thin black lines and jagged lines are the only representations in Figure 2 of physical network connections, and that the "Local Network" is the only network connecting the servers. Appellant further submits that the bold black and gray lines connecting, for example, Client B with Server 4, Server 4 with Server 2, and Server 2 back to Client B, represent only logical data flow from one computer to another, as opposed to physical network connections. Since Figure 2 only depicts one Local Network connecting the servers, it would be impossible for any of the servers to output a packet to each other in a way that "bypasses the first local area network" as recited in Claims 11, 35, and 55, for there is no other path for the output packet to take.

Indeed, interpreting the bold arrows as a physical network path as opposed to mere logical data flow is not consistent with the rest of the Figure. The bold arrows completely bypass the "Internet" cloud. If these arrows did denote network paths, then this would imply that, although each client is connected to the Internet, each client also has a separate connection directly to a g

server through the Local Network, bypassing the Internet. Appellant submits that this interpretation of the Figure is not plausible.

Even if this interpretation (of the bold lines representing network paths as opposed to logical data flow) was accepted, Aversa would still not teach or suggest all of the elements of Claims 11, 35, and 55. If these bold lines were network paths, Aversa would fail to teach or suggest "receiv[ing] an information packet through a global computer network and a first local area network," as the bold lines (for the sake of this argument) depict bypassing the global computer network.

Further, Appellant submits that the two phrases above, quoted from the Office Action, do not teach or suggest bypassing the first local area network while outputting the information packet. The first quote, "forwarding to a different server," only mentions forwarding, but does not suggest doing so in such a way as to avoid the first local area network. The second quote, concerning "a TCP router," is taken out of context by the Office Action. In context, this quote is not describing the distributed load balancing system of Aversa, but instead is describing previous work by Dias et al. in which the "TCP router" was a dedicated load balancing appliance. This system, illustrated in Figure 1(b), fails to disclose outputting an information packet such that it bypasses the first local area network for the same reasons as discussed above with respect to Figure 2.

In light of the above, Appellant respectfully submits that Aversa fails to disclose each and every element of Claims 11, 35, and 55, and that Stevens does not cure this deficiency. Accordingly, Appellant submits that Claims 11, 35, and 55 are patentable over Aversa in view of Stevens. The Board should overturn the rejections of these claims.

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Claim 62

While reciting similar elements to those found in Claims 11, 35, and 55, the elements of independent Claim 62 are sufficiently distinct as to warrant additional discussion. In particular, Appellant submits that Aversa, in view of Stevens, fails to teach or suggest:

> selectively forwarding the information packet such that the forwarded information packet bypasses the first local area network[.]

As discussed above, Appellant submits that Aversa in view of Stevens fails to disclose outputting an information packet such that the output information packet bypasses the first local area network. Similarly, Appellant submits that Aversa in view of Stevens also fails to teach or suggest forwarding an information packet such that the forwarded information packet bypasses the first local area network. In light of this, Appellant respectfully submits that Aversa fails to disclose each and every element of Claim 62, and that Stevens does not cure this deficiency. Accordingly, Appellant submits that Claim 62 is patentable over Aversa in view of Stevens, and that the Board should overturn the rejection of this claim.

Claims 14, 38, 60, and 64

With regard to dependent Claims 14, 38, 60, and 64, Appellant respectfully submits that Aversa, in view of Stevens, fails to teach or suggest:

> outputting an encapsulated information packet, the encapsulated information packet including the information packet and a reference to a data structure of a connection with the client.

Assuming, for the sake of argument, that Aversa discloses using IP-IP encapsulation, as described in Perkins, to forward packets from one server to another (see Aversa, pages 4-5 (citing Perkins)), an IP-IP encapsulated packet header, according to Perkins, nevertheless contains only a Source IP Address and a Destination IP Address. An IP-IP encapsulated packet header does not

include information such as a Source Port and a Destination Port to act as a reference to a data structure of a connection with the client.

The Office Action argued that the source IP address of the client, included in the encapsulated packet, is a reference to a data structure of a connection with the client. See Office Action, pages 4-5, para. 6. Appellant respectfully disagrees. As explained in at least one embodiment shown in the present application, a reference to a data structure of a connection with the client includes a Source IP Address, a Source Port, a Destination IP Address, and a Destination Port. (Page 52, lines 3-18.) Since the source IP address of the client alone is insufficient to reference a data structure of a connection with the client, Appellant submits that the interpretation of the Office Action with regard to this recitation is erroneous.

Further, Aversa's use of IP-IP encapsulation does not suggest the recited encapsulation because Aversa's IP-IP encapsulation is directed to achieve a different goal. As stated in Aversa, IP-IP encapsulation is used to address the ability "to distinguish between packets that have been re-routed and packets that come directly from the client[,]" and so that the receiving server "can find the source IP of Client B within the encapsulated packet to complete the request." (Aversa, Page 4-5.) This does not address the goal of the recited encapsulation, which is efficiency, gained by including additional information within the encapsulation header. As the Specification describes:

> The ipOS encapsulation header of FIGURE 11b is superior to IP-IP encapsulation. For example, with IP-IP encapsulation, the second iNIC would execute additional protocol stack instructions to identify the connection endpoint. By comparison, with the ipOS encapsulation header of FIGURE 11b, the network processor . . . identifies the connection endpoint associated with the packet. Accordingly, the network processor sends the packet and a reference to the connection endpoint to the protocol stack processor . . . . In that manner, the protocol stack processor's efficiency is enhanced.

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Specification, Page 52, line 23, to page 53, line 5. This gain in efficiency is not disclosed or suggested anywhere in Aversa in view of Stevens, even when considering the citation to IP-IP encapsulation as described in Perkins.

In view of the above, and in addition to depending from allowable independent claims, Appellant submits that Aversa in view of Stevens fails to teach or suggest each and every element of Claims 14, 38, 60, and 64. Accordingly, Appellant submits that the 35 U.S.C. § 102(b) rejection of Claims 14, 38, 60, and 64 was in error and requests that the Board overturn the rejection.

Claims 21, 45, and 68

Dependent Claims 21, 45, and 68 recite that at least a portion of the state is received from "a second local area network." The Office Action cited page 6, para. 3 of Aversa as allegedly disclosing this element. Appellant respectfully disagrees. The cited portion of Aversa purportedly discloses having servers in different networks. (Aversa, page 6, para. 2.) Appellant respectfully submits that, in context, these different networks do not disclose a second local area network, but are instead remote networks participating in the system.

Aversa purportedly discloses different networks when describing the multicast distribution of state information. Aversa states: "If more than one network have servers participating in DPR, this process will broadcast the load packet not only to the local network but also to all other networks participating in this protocol." (Aversa, page 6, para. 2.) Appellant submits that this portion of Aversa still discloses only a single local area network and the possibility of other, remote networks, and not a second local area network from which state information is received.

In view of the above, and in addition to depending from allowable independent claims, Appellant submits that Aversa in view of Stevens fails to disclose each and every element of

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Claims 21, 45, and 68. Accordingly, Appellant submits that the 35 U.S.C. § 102(b) rejection of Claims 21, 45, and 68 was in error and requests that the Board overturn the rejection.

Claims 22 and 46

Dependent Claims 22 and 46 recite that "the first local area network includes a hub." The Office Action cited Figure 2, element "Server 4" of Aversa as allegedly disclosing this element. Appellant respectfully disagrees. The cited portion of Aversa clearly discloses a server connected through a local area network to other servers. None of the servers is depicted as handling all network traffic, as would happen in a well-known "hub-and-spoke" network topology. Further, the cited element, "server 2," depicts a server, not a piece of networking hardware such as a network hub.

In view of the above, and in addition to depending from allowable independent claims, Appellant submits that Aversa in view of Stevens fails to disclose each and every element of Claims 22 and 46. Accordingly, Appellant submits that the 35 U.S.C. § 102(b) rejection of Claims 22 and 46 was in error and requests that the Board overturn the rejection.

Claims 49 and 52

Dependent Claims 49 and 52 recite "output[ting] the information packet to a second local area network[.]" The Office Action cited Aversa, page 6, para. 3 as disclosing this limitation. Appellant respectfully disagrees. As discussed above with respect to Claims 21, 45, and 68, Appellant respectfully submits that the cited portion of Aversa does not disclose a second local area network, but instead describes multiple remote networks, thereby not teaching or suggesting "outputting the information packet to a second local area network," as claimed.

In view of the above, and in addition to depending from allowable independent claims, Appellant submits that Aversa in view of Stevens fails to disclose each and every element of

Claims 49 and 52. Accordingly, Appellant submits that the 35 U.S.C. § 102(b) rejection of Claims 49 and 52 was in error and requests that the Board overturn the rejection.

Claims 50 and 53

Dependent Claims 50 and 53 recite "receiv[ing] at least a portion of the state of the information processing system from the second computing device and a third local area network." The Office Action cited Aversa, page 6, para. 3 as disclosing this limitation. Appellant respectfully disagrees. As discussed above with respect to Claims 21, 45, and 68, Appellant respectfully submits that the cited portion of Aversa does not disclose a second local area network, but instead describes multiple remote networks, thereby not teaching or suggesting "receiv[ing] at least a portion of the state of the information procession system from the second computing device and a third local area network," as claimed.

In view of the above, and in addition to depending from allowable independent claims, Appellant submits that Aversa in view of Stevens fails to disclose each and every element of Claims 50 and 53. Accordingly, Appellant submits that the 35 U.S.C. § 102(b) rejection of Claims 50 and 53 was in error and requests that the Board overturn the rejection.

Claims 13, 16-20, 37, 40-44, 51, 54, 56-58, 63, and 65-67

It is well established that if an independent claim is novel under 35 U.S.C. § 102, then any claim depending therefrom is also novel. See *Hartness International, Inc. v. Simplimatic Engineering Co.*, 819 F.2d 1100, 1108, 2 U.S.P.Q.2d 1826, 1831 (Fed. Cir. 1987) (holding a dependent claim "nonobvious (and novel) because it contained all the limitations of [the independent] claim . . . plus a further limitation."). Thus, as independent Claims 11, 35, 55, and 62 are novel and in condition for allowance, Appellant respectfully submits that dependent Claims 13, 16-20, 37, 40-44, 51, 54, 56-58, 63, and 65-67 are also novel by virtue of these dependencies as well as the additional limitations included therein. Appellant therefore

respectfully submits that these rejections under 35 U.S.C. § 102(b) should be overturned by the Board.

Ground 2: Whether Claims 12, 23, 24, 36, 47, 48, 59, and 61 Are Patentable Under 35 U.S.C. § 103(a) Over Aversa in View of Yuasa

It is well established that if an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is also nonobvious. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). See also M.P.E.P. § 2143.03. Per the arguments above, independent Claims 11, 35, 55, and 62 are novel over the cited prior art, and the Office Action did not assert that Claims 11, 35, 55, and 62 were obvious under 35 U.S.C. § 103(a). Thus, as Claims 11, 35, 55, and 62 are in condition for allowance, Appellant submits that dependent Claims 12, 23, 24, 36, 47, 48, 59, and 61 are also in condition for allowance. The disclosure of Yuasa does not teach or suggest the elements discussed above that are missing in Aversa. Appellant respectfully submits that the 35 U.S.C. § 103(a) rejections were in error and should be overturned by the Board.

Ground 3: Whether Claims 15 and 39 Are Patentable Under 35 U.S.C. § 103(a) Over Aversa in View of Perkins

The Office Action finally rejected dependent Claims 15 and 39 as being unpatentable under 35 U.S.C. § 103(a) over Aversa in view of Perkins. Appellant respectfully submits that Aversa and Perkins, alone or in combination, fail to disclose each element of these claims. Moreover, it is well established that in order to make a proper *prima facie* case of obviousness, all elements of the rejected claim must be found in the combined references. See *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). See also *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991) (stating that all claim limitations must be found in the cited references); M.P.E.P. § 2143.03.

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Claims 15 and 39 recite encapsulation of a packet, wherein a reference to a data structure of a connection with the client "is included within a single header of the encapsulated information packet." As discussed above with respect to Claims 14, 38, 60, and 64, Appellant submits that, while Aversa does disclose IP-IP encapsulation as described in Perkins, neither Aversa nor Perkins teaches or suggests including additional information that is sufficient to act as a reference to a data structure of a connection with the client with the encapsulation data. Further, since neither Aversa nor Perkins teaches or suggests including this data at all, they also do not teach or suggest the recited element in Claims 15 and 39, which involves including this data in a single header of the encapsulated packet.

In view of the above, and in addition to depending from allowable independent claims, Appellant submits that Aversa in view of Perkins fails to teach or suggest each element of Claims 15 and 39. Accordingly, Appellant submits that the 35 U.S.C. § 103(a) rejection of Claims 15 and 39 was in error and requests that the Board overturn the rejection.

Respectfully submitted,

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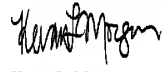

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VIII. CLAIMS APPENDIX

1-10. (Canceled)

11. An information processing system, comprising:

a first computing device configured to:

receive an information packet through a global computer network and a first local area network; and

in response to at least the information packet and a state of the information processing system,

when the state of the information processing system is a first state, selectively output the information packet, such that the output information packet bypasses the first local area network; and

when the state of the information processing system is a second state, selectively execute a software application associated with the information packet.

12. The system of claim 11 wherein the first computing device comprises a network interface card.

13. The system of claim 11 wherein the received information packet originates from a client, and wherein the first local area network is coupled to the global computer network to the client.

14. The system of claim 11 wherein the information packet originates from a client, and wherein the first computing device is configured to:

in response to at least the information packet and the state of the information processing system, selectively output the information packet by outputting an encapsulated information packet, the encapsulated information packet including the information packet and a reference to a data structure of a connection with the client.

15. The system of claim 14 wherein the reference is included within a single header of the encapsulated information packet.

16. The system of claim 11 wherein the first computing device is configured to:

in response to at least the information packet and the state of the information processing system, selectively output the information packet to a second computing device for performing an operation in response to the information packet.

17. The system of claim 16 wherein the information packet originates from a client, wherein the first local area network is coupled to the global computer network to the client, wherein the operation includes outputting a response packet to the client through the first local area network and the global computer network, and wherein the first computing device is configured to:

in response to at least the information packet and the state of the information processing system, selectively output the information packet to the second computing device for outputting the response packet to the client, such that the output response packet bypasses the first computing device.

18. The system of claim 16 wherein the operation is part of a software application executed by the second computing device.

19. The system of claim 18 wherein the software application executed by the second computing device is a socket application.

20. The system of claim 11 wherein the information packet is addressed by the client to the first computing device, and wherein the first computing device is configured to receive the information packet from the first local area network in response to the addressing.

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21. The system of claim 11 wherein the first computing device is configured to receive at least a portion of the state of the information processing system from the second computing device and a second local area network.

22. The system of claim 11 wherein the first local area network includes a hub.

23. The system of claim 11 wherein the first local area network includes a Layer 2 switch, and wherein the Layer 2 switch is coupled to a router device to the global computer network.

24. The system of claim 11 wherein the first local area network includes a Layer 3 switch, and wherein the Layer 3 switch is coupled to the global computer network.

25-34. (Canceled)

35. A method performed by a first computing device of an information processing system, the method comprising:

receiving an information packet from a first local area network coupled to a global computer network; and

in response to at least the information packet and a state of the information processing system,

when the state of the information processing system is a first state, selectively outputting the information packet, such that the output information packet bypasses the first local area network; and

when the state of the information processing system is a second state, selectively executing a software application associated with the information packet.

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36. The method of claim 35 wherein the first computing device comprises a network interface card.

37. The method of claim 35 wherein the information packet originates from a client, and wherein the first local area network is coupled to the global computer network to the client.

38. The method of claim 35 wherein the information packet originates from a client, and wherein the method comprises:

in response to at least the 'information packet and the state of the information processing system, selectively outputting the information packet by outputting an encapsulated information packet, the encapsulated information packet including the information packet and a reference to a data structure of a connection with the client.

39. The method of claim 38 wherein the reference is included within a single header of the encapsulated information packet.

40. The method of claim 35 wherein the method comprises:

in response to at least the information packet and the state of the information processing system, selectively outputting the information packet to a second computing device for performing an operation in response to the information packet.

41. The method of claim 40 wherein the information packet originates from a client, wherein the first local area network is coupled to the global information network to the client, wherein the operation includes outputting a response packet to the client and the first local area network and the global computer network, and wherein the method comprises:

in response to at least the information packet and the state of the information processing system, selectively outputting the information packet to the second computing

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device for outputting the response packet to the client, such that the output response packet bypasses the first computing device.

42. The method of claim 40 wherein the operation is part of a software application executed by the second computing device.

43. The method of claim 42 wherein the software application executed by the second computing device is a socket application.

44. The method of claim 35 wherein the information packet is addressed by the client to the first computing device, and wherein the method comprises:

receiving the information packet from the first local area network in response to the addressing.

45. The method of claim 35 wherein the method comprises:

receiving at least a portion of the state of the information processing system from the second computing device and a second local area network.

46. The method of claim 35 wherein the first local area network includes a hub.

47. The method of claim 35 wherein the first local area network includes a Layer 2 switch, and wherein the Layer 2 switch is coupled to a router to the global computer network.

48. The method of claim 35 wherein the first local area network includes a Layer 3 switch, and wherein the Layer 3 switch is coupled to the global computer network.

49. The system of claim 11 wherein the first computing device is configured to output the information packet to a second local area network to a second computing device.

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50. The system of claim 49 wherein the first computing device is configured to receive at least a portion of the state of the information processing system from the second computing device and a third local area network.

51. The system of claim 11 wherein the state of the information processing system is based at least in part on a state of a second computing device.

52. The method of claim 35 wherein selectively outputting the information packet comprises:

outputting the information packet to a second local area network to a second computing device.

53. The method of claim 52 wherein the method comprises:

receiving at least a portion of the state of the information processing system from the second computing device and a third local area network.

54. The method of claim 35 wherein the state of the information processing system is based at least in part on a state of a second computing device.

55. A server farm, comprising:

a first computing device configured to:

receive an information packet through a global computer network and a first local area network; and

in response to at least the information packet and a state of the server farm,

when the state is a first state, selectively output the information packet, such that the output information packet bypasses the first local area network; and

when the state is a second state, selectively execute a software application associated with the information packet.

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56. The server farm of claim 55 wherein the state of the server farm is based at least in part on a state of the first computing device.

57. The server farm of claim 56 wherein the state of the server farm is based at least in part on a state of a second computing device.

58. The server farm of claim 55 wherein the software application is a socket application.

59. The server farm of claim 55 wherein the first computing device comprises a network interface card.

60. The server farm of claim 55 wherein the first computing device is configured to selectively output the information packet by outputting an encapsulated information packet, the encapsulated information packet including the information packet and a reference to a connection data structure associated with a client.

61. The server farm of claim 55 wherein the first local area network comprises a Layer 3 switch coupled to the global computer network.

62. A computer-readable memory medium storing instructions that, when executed, cause a first computing device of an information processing system to respond to an information packet received through a first local area network and a global computer network by:

when the information processing system is in a first state, selectively executing a software application associated with the information packet; and

when the information processing system is in a second state, selectively forwarding the information packet such that the forwarded information packet bypasses the first local area network.

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63. The computer-readable memory medium of claim 62 wherein the information packet originates from a client coupled to the global computer network.

64. The computer-readable memory medium of claim 63 wherein the instructions further cause the first computing device to selectively forward the information packet by encapsulating the information packet that includes a reference to a connection data structure associated with the client.

65. The computer-readable memory medium of claim 62 wherein the software application is a socket application.

66. The computer-readable memory medium of claim 63 wherein the instructions further cause the first computing device to selectively forward the information packet by forwarding the information packet to a second computing device.

67. The computer-readable memory medium of claim 66 wherein the state of the information processing system is based at least in part on a state of the second computing device.

68. The computer-readable memory medium of claim 62 wherein the instructions further cause the first computing device to receive state information from a second local area network.

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IX. EVIDENCE APPENDIX

None.

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X. RELATED PROCEEDINGS APPENDIX

None.

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